Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

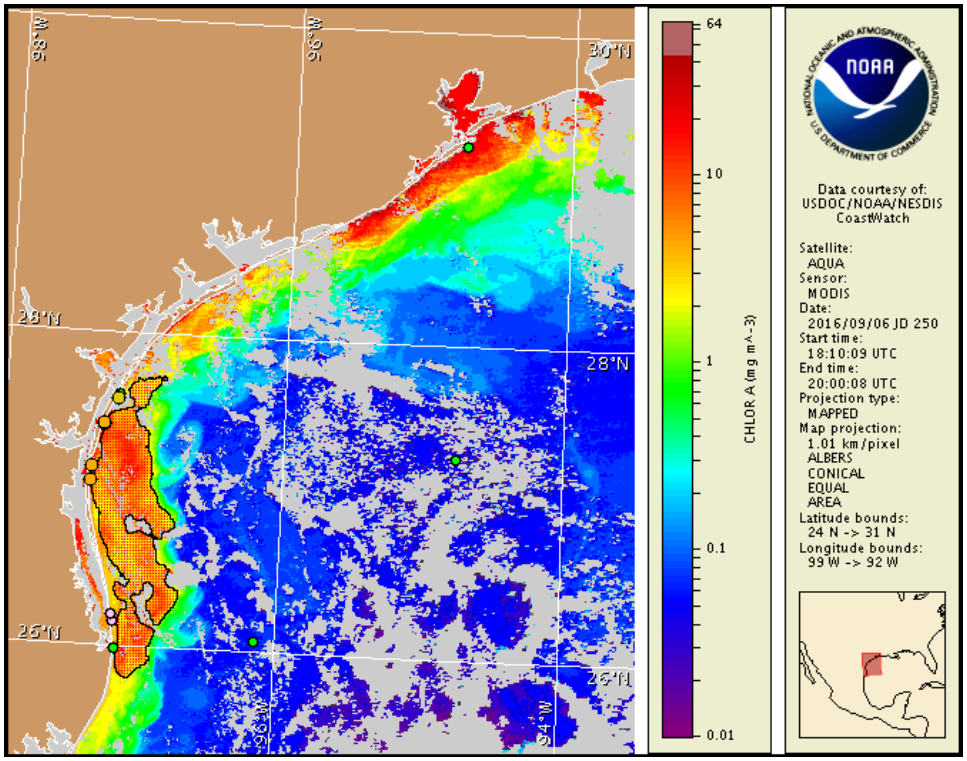
Thursday, 08 September 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Tuesday, September 6, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from August 29 to September 7: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/hab_publication/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

http://www.tpwd.state.tx.us./landwater/water/environconcerns/hab/redtide/status.phtml

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To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

Karenia brevis (commonly known as Texas red tide) ranges from not present to medium concentrations along the Texas coast in the Port Aransas/Mustang Island to Padre Island National Seashore regions. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Thursday, September 8 through Monday, September 12 is listed below:

County Region: Forecast (Duration)
Aransas Pass to PINS region: Moderate (Th-M)
Padre Island National Seashore region: Moderate (Th-M)
All Other Texas Regions: None expected (Th-M)

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Respiratory irritation, discolored water, and dead fish have been reported from the Padre Island National Seashore region.

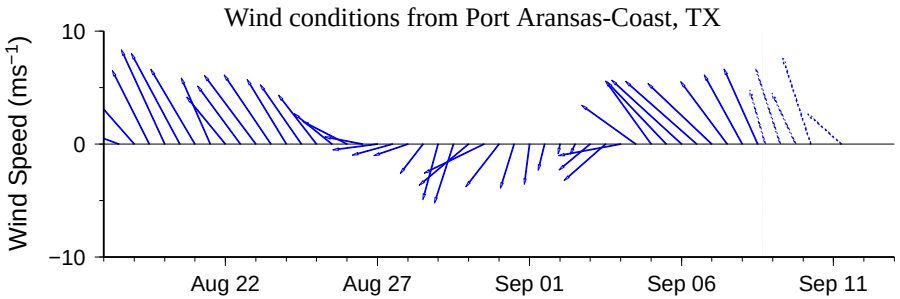
Analysis

Recent samples collected along- and offshore the coast of Texas from Galveston Island to South Padre Island identified 'not present' to 'medium' concentrations of *Karenia brevis*, with the highest concentrations collected from several locations alongshore Malaquite Beach to mile marker 25 in the Padre Island National Seashore (PINS) region (TPWD; 9/6-7). In the Galveston Island region, sampling indicates that *K. brevis* is 'not present' (TPWD; 9/7). In the Aransas Pass to PINS region, sampling from the Texas A&M University's Imaging FlowCytobot, located on the Port Aransas ship channel, indicates that *K. brevis* ranges between 'not present' and 'very low a' concentrations (TAMU; 9/6-7). Samples collected from Bob Hall Pier indicated an increase in *K. brevis* to up to 'low b' concentrations where it was previously 'not present' (TPWD; 9/6-7). In the PINS region, samples continue to indicate 'medium' concentrations of *K. brevis* (TPWD; 9/7). For information on area shellfish restrictions, contact the Texas Department of State Health Services.

Recent MODIS Aqua imagery (9/6; shown left) is partially obscured by clouds along the Texas coast from Sabine Pass to the Mustang Island region, limiting analysis. Patches of elevated to high chlorophyll (2-14μg/L) are visible stretching along the PINS region from about 10 km north of mile marker 0 to 20 km south of the Rio Grande, with some patches extending about 50 km offshore. Chlorophyll appears to be highest in the area along- and offshore the area of PINS where 'medium' concentrations of *K. brevis* were identified. Continued sampling is recommended. A patch of elevated to very high chlorophyll (3 to >20μg/L) is also visible stretching along- and offshore from the Bolivar Peninsula region to Sargent Beach. In this region, elevated chlorophyll is not necessarily indicative of the presence of *K. brevis* and may be due to the resuspension of benthic chlorophyll and sediments along the coast.

Forecast models based on predicted near-surface currents indicate a maximum transport of 15 km north from the Port Aransas region, 40 km north from PINS Mile Marker #15, and 60 km north from Brazos Santiago Pass from September 6-11.

Kavanaugh, Lalime

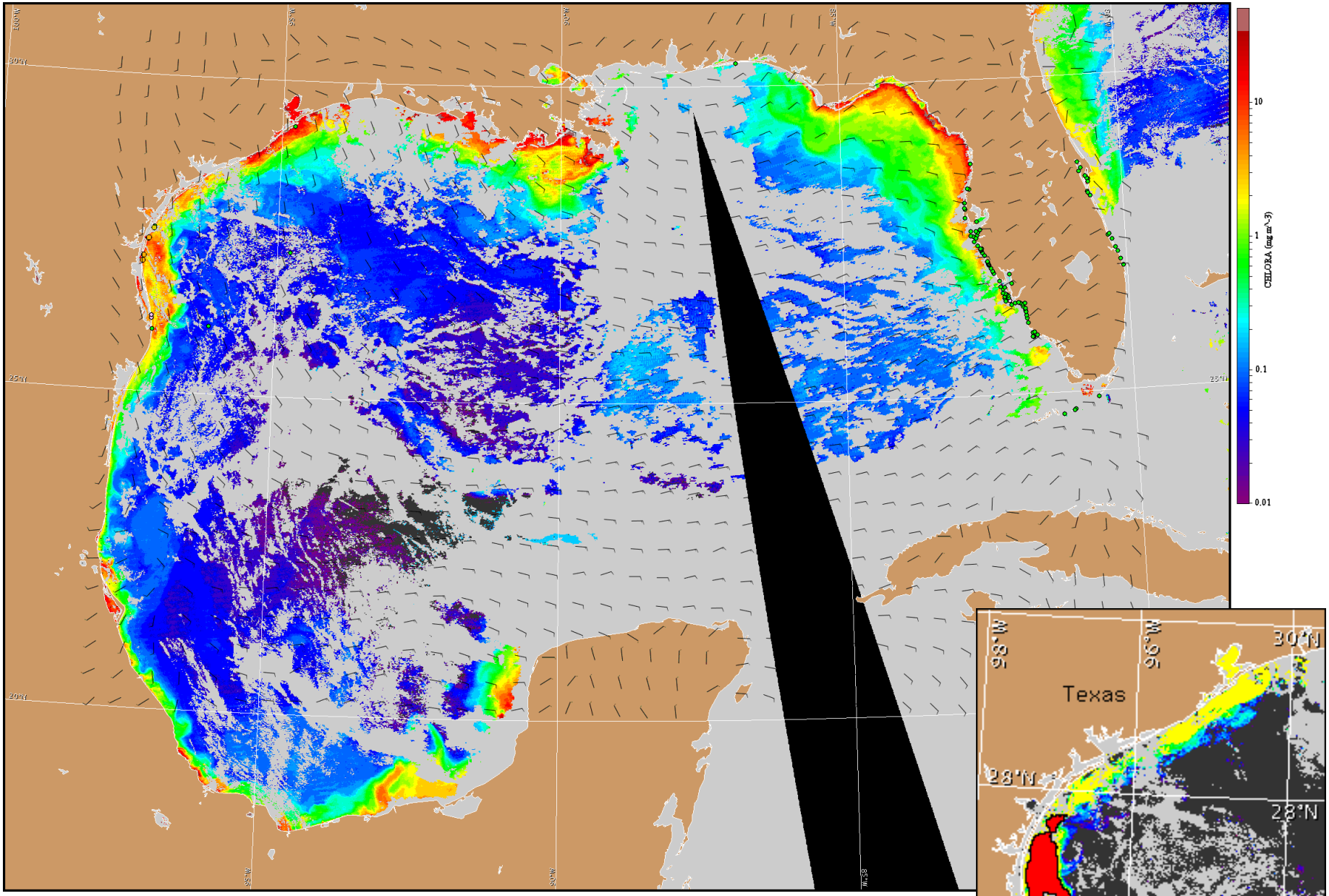


Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

Wind Analysis

Baffin Bay to Port Aransas: Southeast to south winds (5-15kn, 3-8m/s) today through Saturday. East winds (5-10kn, 3-5m/s) Saturday night. Northeast winds (5-10kn) Sunday becoming southeast to east winds (5-15kn) Sunday night through Monday.

Baffin Bay to Port Mansfield: Southeast winds (9-15kn, 5-8m/s) today through Saturday shifting east (7-11kn, 4-6m/s) late Saturday morning through Saturday night. Northeast winds (7-10kn, 4-5m/s) Sunday. Southeast to east winds (7-13kn, 4-7m/s) Sunday night through Monday.



Satellite chlorophyll image and forecast winds for September 9, 2016 12Z with points representing cell concentration sampling data from August 29 to September 7: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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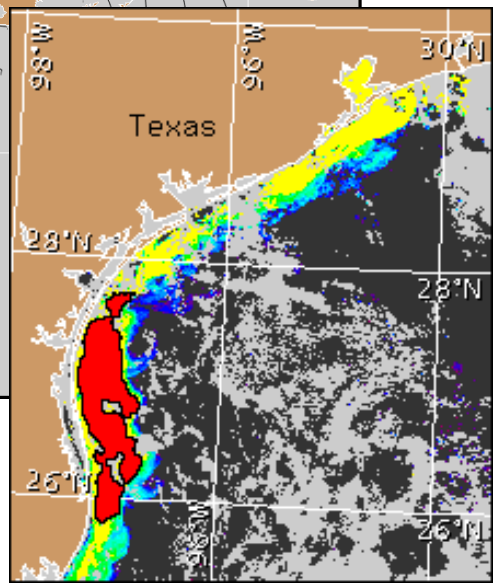

Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).